

Amendments to the

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

- (Currently Amended) An Apparatus apparatus for characterizing a particle particles, wherein the apparatus includes comprises an first means for determining the electrical charge sensor adapted to determine an electrical charge on the particle particles and, an optical device adapted to determine a second means for determining second characteristic of the particle particles, wherein and that the apparatus is arranged adapted to provide an indication of the nature of the particle particles according to the charge and the second characteristic.
- 2. (Currently Amended) The Apparatus apparatus according to Claim 1, wherein the second characteristic is size.
- 3. (Cancelled)
- (Currently Amended) The Apparatus apparatus according to Claim 1, wherein the first means electrical charge sensor includes a pathway for the particle particles and a plurality of electrodes spaced along the pathway arranged to provide an electrical output as the particles pass passes along the pathway.
- 5. (Currently Amended) The Apparatus apparatus according to Claim 4 4, wherein the pathway is provided by an electrically insulative tube and, wherein that the plurality of electrodes are provided on an external surface of the tube.
- (Currently Amended) The Apparatus apparatus according to Claim 4 4, wherein there are five electrodes spaced along the pathway.
- 7. (Currently Amended) The Apparatus apparatus according to Claim 4 4, wherein the outermost electrodes are grounded, that wherein the two electrodes adjacent to the outermost two electrodes are interconnected connected together, and wherein that a signal is derived from the difference between the central electrode and the two interconnected electrodes.
- 8. (Currently Amended) The Apparatus apparatus according to Claim 4 5, wherein the tube has an internal diameter of substantially 0.5mm.

- 9. (Currently Amended) The Apparatus apparatus according to Claim 4 5, further comprising wherein the apparatus includes means a filter adapted to prevent preventing particles greater than about substantially 10µm from entering the tube.
- 10. (Currently Amended) A method of characterizing <u>a particle</u> particles, wherein the method <u>includes comprises</u> the steps of measuring charge on the <u>particle</u> particles, measuring <u>a second an optical</u> characteristic of the <u>particle</u> particles and providing an output indicative of the nature of the <u>particle</u> particles from the charge and the second characteristic combination of both the charge and the optical characteristic.
- 11. (Currently Amended) A method according to Claim 10, wherein the second characteristic is size optical characteristic is indicative of the size of the particle.
- 12. (Currently Amended) An Apparatus apparatus for measuring the a charge on a particle, wherein the apparatus includes comprises a tube comprising a first end and a second end along which the particle is arranged to flow, a first and a second outer electrode, electrodes towards wherein the first outer electrode is located adjacent to the first end and the second outer electrode is located adjacent to the second end opposite ends of the tube, a third electrode adjacent to the first outer electrode and a fourth electrode electrodes adjacent to the first and the second outer electrode electrodes respectively, a fifth electrode located between the third and fourth electrodes, a connection connecting the first and second outer electrodes to ground, a connection connecting the third electrode to and the fourth electrode electrodes with one another and to measuring means and connecting the connected third and the fourth electrodes to a measuring circuit, and a connection connecting the fifth electrode to the measuring means measuring circuit, and that wherein the measuring means measuring circuit is arranged adapted to subtract the signals on the third and fourth electrodes from the signal on the fifth electrode to derive a signal indicative of the charge on the particle.
- 13. (New) An apparatus for characterizing a particle comprising an electrical charge sensor adapted to determine an electrical charge on the particle, wherein the electrical charge sensor comprising a pathway having at least three electrodes spaced along the length of the pathway comprising a central electrode and two outer electrodes, wherein the two outer electrodes are connected together, wherein a charge signal is derived from the difference between a charge on the central electrode and a charge on the connected two

outer electrodes, and wherein the apparatus is adapted to derive an indication of the nature of the particles from the charge signal.

- 14. (New) The apparatus according to Claim 13, further comprising a second device adapted to determine a second characteristic of the particle, and wherein the apparatus is adapted to characterize a particle using the combination of both the charge signal and the second characteristic.
- 15. (New) The apparatus according to Claim 14, wherein the second characteristic is size.
- 16. (New) The apparatus according to Claim 14, wherein the second device is an optical device.
- 17. (New) An apparatus for characterizing a particle in a tube comprising a plurality of electrodes space along the tube and adapted to determine an electrical charge on the particle, and a second device adapted to determine a second characteristic of the particle unrelated to the electrical charge, wherein the apparatus is adapted to provide an indication of the nature of the particle using a combination of both the charge and the second characteristic.